

IN THE CLAIMS

This listing of claims replaces all prior listings:

1. (Currently Amended) A vibratory gyrosensor comprising:

a supporting substrate, which has a wiring pattern having a plurality of lands disposed thereon[[.]]; and

a vibration element mounted on a surface of the supporting substrate, ~~wherein~~ the vibration element ~~includes~~ having a base portion having a mounting surface that faces the supporting substrate and provided with a plurality of terminals that are connected to the lands[[.]] and a vibrator portion extending integrally from a side of the base portion in a cantilever manner and having a substrate-facing surface, the substrate-facing surface being provided with a first electrode layer, a piezoelectric layer stacked on the first electrode layer, and a second electrode layer stacked on the piezoelectric layer, [[and]]

wherein,

at least one of the first electrode layer and second electrode layer having a plurality of electrodes,

the vibration element is mounted on the supporting substrate by joining the terminals to the lands with metallic projections disposed therebetween.

2. (Original) The vibratory gyrosensor according to Claim 1, wherein the metallic projections comprise gold bumps each provided on a corresponding one of the terminals, each gold bump being welded to the corresponding one of the lands.

3. (Original) The vibratory gyrosensor according to Claim 2, wherein each gold bump comprises multi-tiered bump components.

4. (Original) The vibratory gyrosensor according to Claim 1, wherein the mounting surface of the base portion is provided with a dummy bump.

5. (Currently Amended) The vibratory gyrosensor according to Claim 1, wherein

the vibrator portion is disposed at a lower level from a top surface of the base portion with a slope disposed therebetween, and

wherein at least one of the metallic projections is disposed in a region corresponding to a region in which the slope is not provided.

6. (Original) The vibratory gyrosensor according to Claim 1, wherein the mounting surface of the base portion is provided with a groove which extends across a region between a base end of the vibrator portion and at least one of the terminals positioned proximate to the vibrator portion

7. (Cancelled)

8. (Original) The vibratory gyrosensor according to Claim 1, wherein the supporting substrate is provided with a recess in a region facing the substrate-facing surface of the vibrator portion, the recess providing a space in which the vibrator portion is allowed to vibrate freely in a thickness direction thereof.

9. (Cancelled)

10. (Currently Amended) The vibratory gyrosensor according to Claim 1, wherein the supporting substrate has a circuit element and a plurality of [[the]] vibration elements mounted thereon, the ~~vibrator portions of the vibration elements~~ have vibrator portions [[being]] oriented in different axial directions from each other.

11. (Cancelled)

12. (Currently Amended) A vibratory gyrosensor comprising:
a supporting substrate, which has a circuit element mounted thereon and a wiring pattern
having a plurality of lands disposed thereon[[.]]; and
a vibration element mounted on a surface of the supporting substrate, ~~wherein the~~
vibration element ~~includes~~ having a base portion having a mounting surface that faces the

supporting substrate and provided with a plurality of terminals that are connected to the lands[[;]], and a vibrator portion extending integrally from a side of the base portion in a cantilever manner and having a substrate-facing surface, the substrate-facing surface being provided with a first electrode layer, a piezoelectric layer stacked on the first electrode layer, and a second electrode layer stacked on the piezoelectric layer, [[and]]

wherein,

at least one of the first electrode layer and second electrode layer having a plurality of electrodes,

the vibration element is mounted on the supporting substrate by joining the terminals to the lands with metallic projections disposed therebetween, [[and]]

wherein the supporting substrate has a first main surface on which the vibration element and the circuit element are mounted, and a second main surface is provided with a plurality of external connection terminals for electrically connecting the vibration element to an external control substrate.

13. - 19. (Cancelled)

20. (Original) The vibratory gyrosensor according to Claim 12, wherein the vibration element is covered with a light-shielding cover.

21. (Original) The vibratory gyrosensor according to Claim 12, wherein the external connection terminals and the control substrate have a load buffering layer disposed therebetween.

22. - 23. (Cancelled)

24. (Currently Amended) The vibratory gyrosensor according to Claim 1, wherein the ~~vibrator portion has~~ a substrate-facing surface [[which]] is flush with [[a]] the mounting surface of the base portion, ~~the substrate-facing surface being provided with a first electrode layer, a piezoelectric layer stacked on the first electrode layer, and a second electrode layer stacked on the piezoelectric layer.~~

25. (Currently Amended) The vibratory gyrosensor according to Claim 12, wherein the ~~vibrator portion has a substrate-facing surface~~ ^{[[which]]} is flush with ^{[[a]]} ~~the~~ mounting surface of the base portion, ~~the substrate-facing surface being provided with a first electrode layer, a piezoelectric layer stacked on the first electrode layer, and a second electrode layer stacked on the piezoelectric layer.~~

26. (New) The vibratory gyrosensor according to Claim 1, wherein:
the mounting surface of the base portion is square shape, and
the plurality of lands is equal to at least four lands and two of the plurality of lands are located at corner positions of the mounting surface.